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November 12, 1992

Ms. Donna Searcy
Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, DC 20554

Re: Ex Parte Meeting in MM Docket No. 87-268

Dear Ms. Searcy:

On November 12, 1992, Jerry Pearlman of Zenith Electronics Corp., Curtis Crawford of AT&T Microelectronics, Don Leonard of AT&T Bell Laboratories and I met with certain members and staff of the Commission to discuss the need for supplemental testing of HDTV systems.

We met separately with Sandy Wilson of Chairman Sikes' office; Commissioner Duggan and John Hollar; Commissioner Barrett, Bob Branson and Byron Marchant; Peter Ross of Commissioner Marshall's office; and Brian Fontes of Commissioner Quello's office. The attached materials were used in our discussions.

Because our meetings concluded late in the day, two copies of this Notice are hereby submitted on the next business day, in accordance with Section 1.1206(a)(1) of the Commission's Rules.

Sincerely,

Robert Graves/cs

Attachments

Copy to: FCC attendees (w/o attachments)

SUPPLEMENTAL TESTING FOR ATV SYSTEMS

- Zenith and AT&T fully support the FCC's Advisory Committee (ACATS) process for selecting an HDTV transmission standard for the nation. Strong leadership by the Commission and ACATS Chairman Wiley and his chief lieutenants has propelled the U.S. into a commanding position in the worldwide race to capitalize on breakthroughs in digital video compression technology.

- We believe that continuing this aggressive program to complete the HDTV standard selection process during the coming year is vital for broadcasters and for the country.

- To make the best possible decision, ACATS and the FCC must rely on the most complete, up-to-date information possible.

- At this stage in the process, rapid progress in the implementation of digital video compression technology means that systems tested as much as a year or more ago may have been significantly improved since that time.

- In the case of the Zenith/AT&T system, this expected progression has been particularly pronounced because we encountered delays prior to testing which left us unable to tune our sophisticated prototype system adequately. At the time, we believed it was imperative to enter the test center on time, even though we had not fully completed the integration and tuning of our system. (Later, another proponent was permitted to begin testing three weeks late in order to get its system working properly.)

- Despite these problems, our system performed very well in most respects, however, the inadequate tuning did cause a negative impact on some aspects of video quality.

- Since leaving the test center, we have done much more careful tuning and optimizing of our system, and also made a series of relatively modest improvements which in the aggregate have resulted in a significant improvement in overall performance.

- We believe that the nation will be best served if the recommendation of the Advisory Committee and the ultimate decision of the FCC are based on the most complete, up-to-date and reliable information possible. Consequently, we believe it is imperative that the Advisory Committee consider the improvements to HDTV systems that have been made since ATTC testing. We are anxious to ensure that our

system is considered based on its true capabilities, not the lesser performance exhibited almost nine months ago.

- Zenith and AT&T believe that the Advisory Committee leadership has already correctly determined that the country will be better served by considering improvements that have been made to the HDTV systems since ATTC testing. The issue now is whether such improvements should be the subject of supplementary laboratory testing, or whether some other evaluation process should suffice, given the desire to bring the standard selection to a speedy conclusion.

- We believe that a paper process alone will be inadequate for reliably assessing the benefits of claimed improvements. Limited supplemental laboratory testing of such improvements is essential. (Some other proponents are being disingenuous when they claim that anything short of full retesting would compromise the integrity of the testing process, yet at the same time argue that their system improvements could be adequately verified by the limited observations contemplated in the field testing program to follow.)

- Zenith and AT&T believe that supplemental testing of system improvements can be accommodated within the current time schedule, if the Advisory Committee musters the will to do so. We have done a careful analysis of the tests required to assess the improvements to our system and to verify that they have not come at the expense of other aspects of performance. Our analysis persuades us that the limited supplemental testing required for our system can be accomplished within one week. Testing of the other proponents' systems should take less time, since they appear to claim substantially fewer improvements. We also believe that a streamlined analysis and reporting process can be utilized to supplement the evaluation reports already being prepared.

- However, if contrary to our belief, impartial experts involved in the process feel that the current time schedule cannot accommodate supplemental testing, or if the controversy surrounding the issue wastes too much of the precious time remaining, we believe that the Advisory Committee should provide a short extension of the schedule in order to accommodate limited supplemental testing of improvements. The need to base a decision on the most reliable, complete and up-to-date information warrants a short extension, if necessary, to ensure that the system upon which the nation will rely for the coming decades is indeed the best. (Moreover, it is possible that unrelated problems with the testing and evaluation process could cause

a delay in the schedule. If so, the Advisory Committee certainly should make the best possible use of that time by conducting supplemental testing of improvements.)

- There is an additional factor that argues for supplemental testing. We have just completed an analysis of the levels and types of noise in outtakes from the shooting of the 787 camera scenes used as ATTC test materials. Our measurements indicate noise levels about 6 dB higher than those found in the corresponding 1125 source materials against which our system was judged. This is well beyond the 1.5 to 2 dB higher noise levels that were expected from the 787 camera. In addition, we have identified at least one other type of noise that appears to have been in the 787 materials but not in the 1050 materials derived from the 1125 source. Thus, our system and the one other 787 system had to deal with approximately four times more noise power (about twice the signal level) than did the systems that used 1125 source materials. This means the 787 systems were burdened with coding high levels of source noise, something especially difficult because of the unpredictability of noise. We expect to work with the Advisory Committee to analyze the actual source materials and to determine what impact this noise has on the evaluation of the two 787 systems. At a minimum, however, we believe this situation provides another compelling reason for testing one of the most significant improvements we've made to our system--the increased ability to perform in the presence of heavy source noise.

- We urge the Commission to encourage its Advisory Committee to do all in its power to accommodate supplemental laboratory testing of HDTV systems, to ensure that its recommendation is based on the most up-to-date, complete and reliable data possible.

Zenith/AT&T 11/10/92